

ATGGACAAAACTCACACATGTCCACCTTGTCCAGCTCCGGAACTCCTGGGGGGACCGTCA

1 -----+ 60
TACCTGTTTTGAGTGTGTACAGGTGGAACAGGTCGAGGCCTTGAGGACCCCCCTGGCAGT

- a MDKTHTCPPCPAPELLGGPS -
  - GTCTTCCTCTCCCCCAAAACCCAAGGACACCCTCATGATCTCCCGGACCCCTGAGGTC
    61 ------+------+------+------+ 120
    CAGAAGGAGAAGGGGGTTTTGGGTTCCTGTGGGAGTACTAGAGGGCCTGGGGACTCCAG
- a VFLFPPKPKDTLMISRTPEV -
  - ACATGCGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTG
    121 ------+ 180
    TGTACGCACCACCACCTGCACTCGGTGCTTCTGGGACTCCAGTTCAAGTTGACCATGCAC
- a TCVVVDVSHEDPEVKFNWYV -

GACGGCGTGGAGGTGCATAATGCCAAGACAAGCCGCGGGAGGAGCAGTACAACAGCACG
181 -----+ 240
CTGCCGCACCTCCACGTATTACGGTTCTGTTTCGGCGCCCCTCCTCGTCATGTTGTCGTGC

- a DGVEVHNAKTKPREEQYNST -
  - TACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTAC 241 ------+ 300 ATGGCACACCAGTCGCAGGAGTGGCAGGACGTGGTCCTGACCGACTTACCGTTCCTCATG
- a YRVVSVLTVLHQDWLNGKEY -

AAGTGCAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCCAAAGCC 301 ------+ 360 TTCACGTTCCAGAGGTTGTTTCGGGAGGGTCGGGGGTAGCTCTTTTGGTAGAGGTTTCGG

- a KCKVSNKALPAPIEKTISKA -
  - AAAGGCAGCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAGCTGACC
    361 -----+ 420
    TTTCCCGTCGGGGCTCTTGGTGTCCACATGTGGGACGGGGGTAGGGCCCTACTCGACTGG
- a KGQPREPQVYTLPPSRDELT -

AAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGTG 421 ------+ 480 TTCTTGGTCCAGTCGGACTGGACGGACCAGTTTCCGAAGATAGGGTCGCTGTAGCGGCAC

- a KNQVSLTCLVKGFYPSDIAV -
  - GAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCGTGCTGGAC 481 -----+ 540 CTCACCCTCTCGTTACCCGTCGGCCTCTTGTTGATGTTCTGGTGCGGAGGGCACGACCTG
- a EWESNGQPENNYKTTPPVLD -

TCCGACGGCTCCTTCTTCCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAG
541 -----+ 600
AGGCTGCCGAGGAAGAAGAAGAGTTCGTTCGAGTGGCACCTGTTCTCGTCCACCGTCGTC

- a SDGSFFLYSKLTVDKSRWQQ -
  - GGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAG 601 ------+ 660

### FIGURE 5 (cont'd)

 ${\tt CCCTTGCAGAAGAGTACGAGGCACTACGTACTCCGAGACGTGTTGGTGATGTGCGTCTTC}$ 

a GNVFSCSVMHEALHNHYTQK-

AGCCTCTCCCTGTCTCCGGGTAAA 661 ------ 684 TCGGAGAGGGACAGAGGCCCATTT

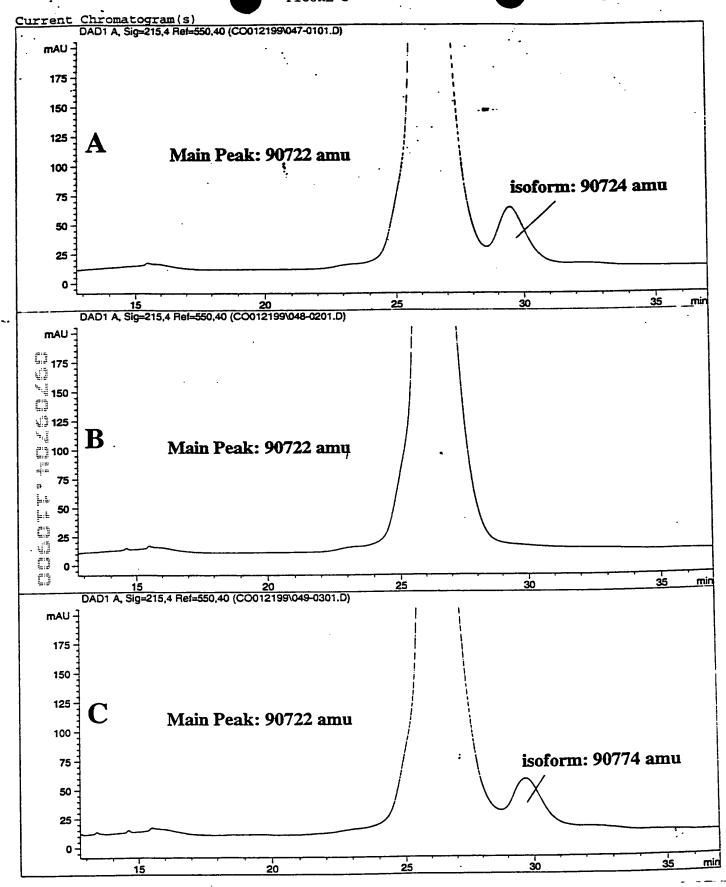
a SLSLSPGK

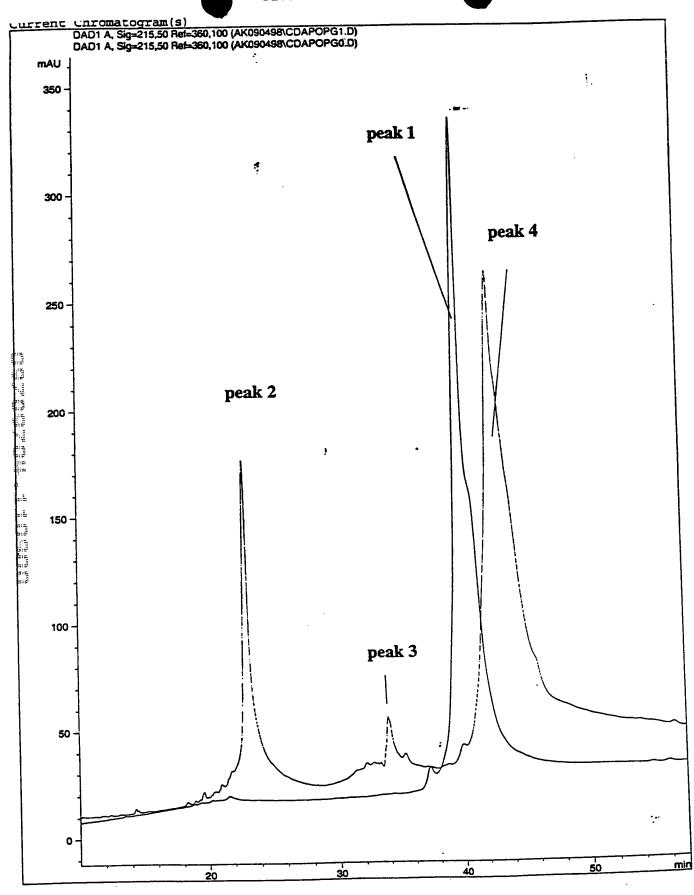
Cysteine—S—H + 
$$H^+$$
  $H^+$  Cysteine—S—C $\equiv$ N

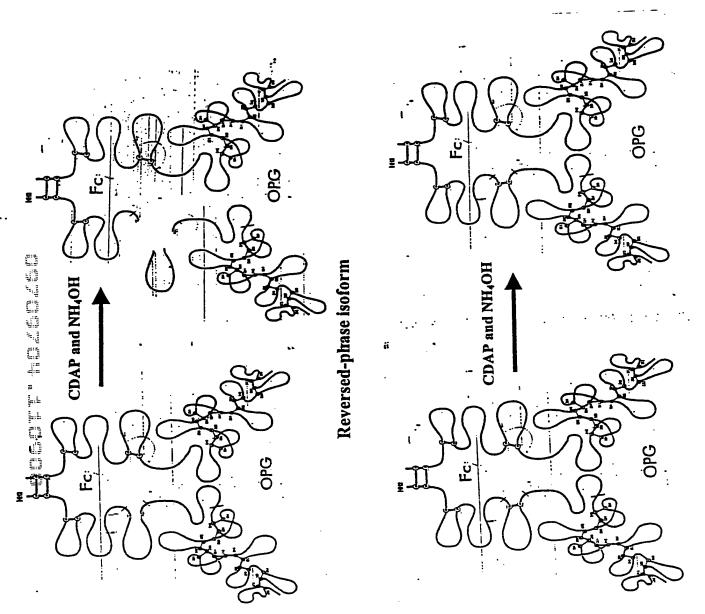
N Ter minus 
$$\frac{1}{N}$$
  $\frac{1}{N}$   $\frac{$ 

peptide

itz-peptide, mass gain of 26 Da







Reversed-phase main peak

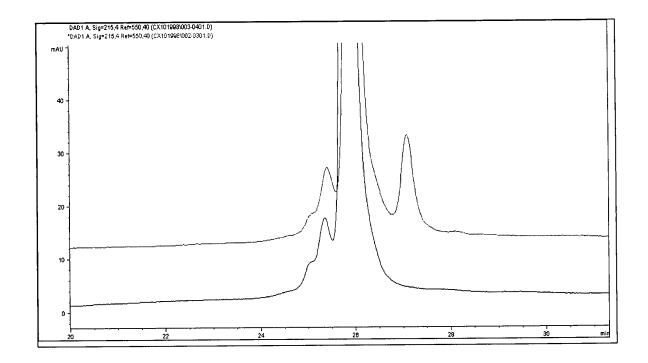


Figure 11. Reversed-phase HPLC of untreated (upper trace) and copper treated (lower trace) FcOPG.

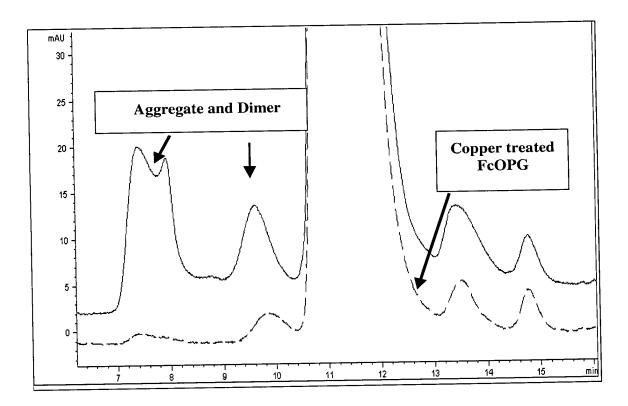


Figure 12. Size-exclusion HPLC of FcOPG after 2 years incubation at 29°C; copper treated FcOPG (lower trace) and untreated FcOPG (upper trace).